

What is claimed is:

1. A composition comprising trichloroethane and a stabilizing amount of stable free radical stabilizer.
2. The composition of claim 1 wherein the trichloroethane is selected from 1,1,1-trichloroethane, 1,1,2-trichloroethane and mixtures of 1,1,1-trichloroethane and 1,1,2-trichloroethane.
3. The composition of claim 2 wherein the free radical stabilizer is present in amounts of at least 5 parts per million parts of trichloroethane.
4. The composition of claim 3 wherein the free radical stabilizer is a material having the 2,2,6,6-tetra(lower alkyl)-1-piperidinyloxy-yl free radical group.
5. The composition of claim 4 wherein the 2,2,6,6-tetra(lower alkyl)-1-piperidinyloxy-yl free radical group is a 2,2,6,6-tetramethyl-1-piperidinyloxy-yl free radical group.
6. The composition of claim 3 wherein the stable free radical stabilizer is a material having the 2,2,6,6-tetra(lower alkyl)-1-piperidinyloxy-4-yl free radical group.
7. The composition of claim 6 wherein the stable free radical stabilizer is a material having the group 2,2,6,6-tetramethyl-4-hydroxy-1-piperidinyloxy, 2,2,6,6-tetramethyl-4-amino-piperidinyloxy, 2,2,6,6-tetramethyl-4-dimethylamino-piperidinyloxy, 2,2,6,6-tetramethyl-4-ethanoyloxy-piperidinyloxy, 2,2,6,6-tetramethyl-4-oxo-1-piperidinyloxy, 2,2,6,6-tetramethyl-4-((methylsulfonyl)oxy)-1-piperidinyloxy, or 2,2,6,6-tetramethyl-1-piperidinyloxy-4-yl benzoate.
8. The composition of claim 6 wherein the stable free radical stabilizer is bis(2,2,6,6-tetramethyl-1-piperidinyloxy-4-yl) ester of saturated dicarboxylic acid.
9. The composition of claim 8 wherein the saturated dicarboxylic acid contains from 2 to 13 carbon atoms.
10. The composition of claim 8 wherein the stable free radical stabilizer is bis(2,2,6,6-tetramethyl-1-piperidinyloxy-4-yl) sebacate.
11. The composition of claim 3 wherein the free radical stabilizer is a material having the 2,2,6,6-tetramethyl-4-hydroxy-1-piperidinyloxy group, which material is present in amounts of from 5 to 20 parts per million parts of trichloroethane.

12. The composition of claim 2 wherein the free radical stabilizer is present in amounts of from 5 to 20 parts per million parts of trichloroethane.

13. The composition of claim 3 wherein the free radical stabilizer is a material having a 2,2,5,5-tetra(lower alkyl) pyrrolidinyloxy group.

14. The composition of claim 13 wherein the 2,2,5,5-tetra(lower alkyl) pyrrolidinyloxy group is 2,2,5,5-tetramethyl pyrrolidinyloxy.

15. The composition of claim 14 wherein the free radical stabilizer is a material having the group 2,2,5,5-tetramethyl-3-amino-pyrrolidinyloxy, 2,2,5,5-tetramethyl-1-oxa-3-azacyclopentyl-3-oxy, or 2,2,5,5-tetramethyl-3-pyrrolinyl-1-oxy-3-carboxylic acid.

16. The composition of claim 15 wherein the free radical stabilizer is present in amounts of from 5 to 20 parts per million parts of trichloroethane.

17. A method for removing stable free radical stabilizer from a liquid composition comprising trichloroethane and minor amounts of stable free radical stabilizer, comprising contacting said liquid composition with an amount of silica sufficient to adsorb stable free radical stabilizer and provide a trichloroethane composition substantially free of stable free radical stabilizer.

18. The method of claim 17 wherein the silica is precipitated silica, silica gel or fumed silica.

19. The method of claim 17 wherein the silica is precipitated silica, which is used in amounts of at least 0.05 weight percent, based on the amount of trichloroethane in the liquid composition.